



BIOLOGY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME
DRURY UNIVERSITY

EDUCATOR PREPARATION PROGRAM CODE
603541

INSTRUCTIONS

Please complete Educator Preparation Program (EPP) Name & EPP Code above.

Certification Requirements:

- Course Number – List the course number(s) for the course(s) or groups of competencies that align with the specific section of the requirements. It is possible to have more than one course or group listed.
- Course Title – List the course title(s) for the course(s) or groups of competencies that align with the specific section of the requirements. It is possible to have more than one course or group listed.
- Semester Hours – List the number of semester hours for each specific section. It is possible to use decimals (to the nearest tenth) to indicate partial use of a course to meet a requirement. The total number of semester hours must meet or exceed the minimum required number of semester hours.

Email the completed cover sheet, curriculum matrix, and advising/program information to DESE.MoSPETransition@dese.mo.gov on or before the date established in the Transition Plan.

QUESTIONS: Contact Educator Preparation, 573-751-1668 or DESE.MoSPETransition@dese.mo.gov

A. Professional Requirements (Minimum of 26 semester hours)

1. Content Planning and Delivery

| | Course Number | Course Title | Semester Hours |
|--|-------------------------|--|----------------|
| a. Curriculum and Instructional Planning | EDUC 200 | Technology in the Classroom | 1 |
| | EDUC 304 or EDUC 638 | Teaching in Diverse Classrooms | .5 |
| | | Teaching and Learning in Diverse Classrooms | .5 |
| | EDUC 350 | Methods of Teaching the Biological & Physical Sciences | 1 |
| b. Instructional Strategies and Techniques in Content Area Specialty | EDUC 308 EDUC 350 | Secondary Content Area Literacy | 3 |
| | | Methods of Teaching the Biological & Physical Sciences | .5 |
| | EDUC 385 | Secondary School Curriculum | .5 |
| c. Assessment, Student Data, and Data-Based Decision-Making | EDUC 302 | Educational Psychology & Assessment | 1 |
| | EDUC 385 | Secondary School Curriculum | .5 |
| d. Strategies for Content Literacy | EDUC 331 or EDUC 632 | Content Area Literacy | 2 |
| | | Literacy Instruction in the Content Area | 2 |
| e. Critical Thinking and Problem Solving | EDUC 205 or EDUC 203 | Diversity & Social Justice in Education | .5 |
| | | The American Classroom | .5 |
| f. English Language Learning | EDUC 205 or EDUC 203 | Diversity & Social Justice in Education | .5 |
| | | The American Classroom | .5 |
| | EDUC 304 or EDUC 638 | Teaching in Diverse Classrooms | .5 |
| | | Teaching and Learning in Diverse Classrooms | .5 |
| | EDUC 331 or EDUC 632 | Content Area Literacy | 1 |
| Literacy Instruction in the Content Area | | 1 | |
| | EDUC 340 | Education of the Exceptional Child | .5 |

2. Individual Student Needs

| | Course Number | Course Title | Semester Hours |
|--|-------------------------|--|----------------|
| a. Psychological Development of the Child and Adolescent | EDUC 207 | Psychology of Human Growth & Development | 3 |
| b. Psychology/Education of the Exceptional Child | EDUC 340 | Education of the Exceptional Child | 2.5 |
| c. Differentiated Learning | EDUC 350 | Methods of Teaching the Biological & Physical Sciences | .5 |
| | EDUC 385 | Secondary School Curriculum | .5 |
| d. Classroom Management | EDUC 361 or EDUC 608 | Collaborative Classroom Environments | 3 |
| | | Classroom Management for Teachers | 3 |

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|---|---|--|---|
| e. Cultural Diversity | EDUC 205 or EDUC 203 | Diversity & Social Justice in Education The American Classroom | 1 1 |
| | EDUC 304 or EDUC 638 | Teaching in Diverse Classrooms Teaching and Learning in Diverse Classrooms | .5 .5 |
| f. Educational Psychology | EDUC 302 | Educational Psychology & Assessment | 2 |
| 3. Schools and the Teaching Profession | | | |
| | Course Number | Course Title | Semester Hours |
| a. Consultation and Collaboration | EDUC 304 or EDUC 638 | Teaching in Diverse Classrooms Teaching and Learning in Diverse Classrooms | .5 .5 |
| b. Legal/Ethical Aspects of Teaching | EDUC 200 | Technology in the Classroom | 1 |
| | EDUC 205 or EDUC 203 | Diversity & Social Justice in Education The American Classroom | 1 1 |
| 4. Secondary Literacy (Minimum of six semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| a. Reading and Writing in the Content Area | EDUC 331 or EDUC 632 | Content Area Literacy Literacy Instruction in the Content Area | 3 3 |
| b. Instructional Interventions for Students with Reading Deficits | EDUC 308 | Secondary Content Area Literacy | 3 |
| Professional Requirements - Total Semester Hours | | | 37 |
| B. Field and Clinical Experiences (Minimum of ten semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| 1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours) | EDUC 201 or EDUC 208 | Teacher Aide I or Introductory Practicum | 1 1 |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours) | EDUC 303 | Secondary Education Field Experience I | 1 |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | EDUC 478 | Student Teaching on the Secondary School Level | 10 |
| Field and Clinical Experiences - Total Semester Hours | | | 12 |
| C. Biology Content Knowledge Area (Minimum of 35 semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| 1. History/Philosophy of Science and Technology (Minimum of three semester hours) | PHIL 277 | Philosophy of Science | 3 |
| 2. Biology Coursework – Minimum of 20 semester hours which must include: | | | |
| a. Cell Biology | BIOL 172 | Exploring Molecular Biology | 3 |
| b. Plant Form and Function | Choose one course: BIOL 306 BIOL 307 | Medical Botany Botany | 3 4 |
| c. Animal Form and Function | Choose one course: BIOL 309 BIOL 316 BIOL 321 BIOL 373 BIOL 378 BIOL 379 | Zoology Comparative Anatomy Comprehensive Human Anatomy Herpetology Advanced Human Physiology I Advanced Human Physiology II | 4 5 5 4 5 5 |
| d. Genetics | BIOL 181 | Mechanisms of Genetic Inheritance | 3 |
| e. Evolution | BIOL 182 | Evolution | 2 |
| f. Biology Electives | Choose course(s) to complete 20 hours in Biology Coursework: BIOL 102 BIOL 110 BIOL 160 BIOL 171 BIOL 201 BIOL 205 BIOL 206 BIOL 207 BIOL 208 BIOL 210 BIOL 214 BIOL 217 | General Biology Fundamentals of Cell Biology Exploration & Discovery in Biology Scientific Endeavors Biodiversity Human Anatomy Human Physiology Anatomy & Physiology Microbiology Wildlife Management Environmental Microbiology Anatomy & Physiology II | 4 4 3 3 3 4 4 4 4 4 3 3 4 |

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| | BIOL 301 | Advanced Evolutionary Biology | 3 |
| | BIOL 306 | Medical Botany | 3 |
| | BIOL 308 | Immunology | 3 |
| | BIOL 310 | Field & Systematic Botany | 4 |
| | BIOL 312 | Advanced Ecology | 4 |
| | BIOL 313 | Advanced Microbiology | 4 |
| | BIOL 314 | Field & Systematic Zoology | 4 |
| | BIOL 315 | Field Techniques | 3 |
| | BIOL 316 | Comparative Anatomy | 5 |
| | BIOL 317 | Vertebrate Embryology | 4 |
| | BIOL 320 | Vertebrate Physiology | 4 |
| | BIOL 321 | Comprehensive Human Anatomy | 5 |
| | BIOL 322 | Advanced Genetics | 4 |
| | BIOL 324 | Cellular & Molecular Biology | 3 |
| | BIOL 325 | Epidemiology | 3 |
| | BIOL 328 | Parasitology | 3 |
| | BIOL 329 | Introduction to Marine Biology | 4 |
| | BIOL 330 | Field Study in Marine Biology | 3 |
| | BIOL 332 | Biology of Terrestrial Plants & Animals | 4 |
| | BIOL 333 | Histology | 4 |
| | BIOL 334 | Developmental Biology | 3 |
| | BIOL 337 | Introduction to Virology | 3 |
| | BIOL 338 | Biology of Lakes & Streams | 4 |
| | BIOL 341 | Limnology | 4 |
| | BIOL 344 | Toxicology | 3 |
| | BIOL 351 | Junior Seminar | 1 |
| | BIOL 371 | Entomology | 3 |
| | BIOL 373 | Herpetology | 4 |
| | BIOL 378 | Advanced Human Physiology I | 5 |
| | BIOL 379 | Advanced Human Physiology II | 5 |
| | BIOL 381 | Pharmacology | 3 |
| | BIOL 382 | Pathophysiology | 4 |
| 3. | Additional Science Coursework – Minimum of 12 semester hours which must include: | | |
| a. | Chemistry | CHEM 238 or CHEM 107 | Inorganic Chemistry General Chemistry |
| | | | 3 4 |
| b. | Physics | PHYS 201 | Principles of Physics |
| | | | 4 |
| c. | Earth Science | PHYS 100 | Earth Science |
| | | | 3 |
| d. | Environmental Science | BIOL 200 | Ecology |
| | | | 3 |
| Content Knowledge Area - Total Semester Hours | | | 35 or 38 |

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